

- 1 1. A solid bowl helical conveyor centrifuge having the following:
2 a rotating drum, which includes a centrifuge space with a rotatable screw;
3 an inlet tube for supplying a material for centrifugation into the centrifuge space;
4 at least one liquid discharge and at least one solids discharge; wherein
5 the liquid discharge and/or the solid discharge having at least one or more openings in a
6 rotating part of the solid bowl helical conveyor centrifuge, in particular through openings in the drum
7 wall;
8 at least one of the openings is covered by a housing which encloses the drum of the solid
9 bowl helical conveyor centrifuge in only some sections; and
10 between the at least one housing and the drum and/or other rotating elements of the solid
11 bowl helical conveyor centrifuge (drum heads, hubs) at least one or more gaskets are provided.
- 1 2. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the gaskets are
2 bearing ring gaskets.
- 1 3. The solid bowl helical conveyor centrifuge according to Claim 1, wherein at least one of the
2 openings is in an axial end face of the drum wall.
- 1 4. The solid bowl helical conveyor centrifuge according to Claim 1, wherein at least one of the
2 openings is in the circumferential wall of the drum and points radially outward.
- 1 5. The solid bowl helical conveyor centrifuge according to Claim 1, wherein at least one
2 housing extends over the area of the openings on the drum.

- 1 6. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the at least one
2 housing is in the form of a ring.
- 1 7. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the gaskets are
2 arranged between the inside circumference of the axial wall of the housing and that of the
3 drum.
- 1 8. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the at least one
2 housing is designed with a step and extends over a step of the drum.
- 1 9. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the at least one
2 housing cannot rotate.
- 1 10. The solid bowl helical conveyor centrifuge according to Claim 1, wherein at least one of the
2 openings is a solids discharge in or connected to a tapered section of the drum.
- 1 11. The solid bowl helical conveyor centrifuge according to Claim 10, wherein the liquid
2 discharge is a scraper disk.
- 1 12. The solid bowl helical conveyor centrifuge according to Claim 11, wherein the scraper disk
2 is arranged in a chamber of the drum, adjacent to the centrifuge space.
- 1 13. The solid bowl helical conveyor centrifuge according to Claim 12, wherein the chamber is
2 connected to the drum by at least one opening.
- 1 14. The solid bowl helical conveyor centrifuge according to Claim 1, wherein at least one of the
2 openings is a liquid discharge in the form of an overflow opening in the end face of the drum

3 facing away from the solids discharge, whereby this at least one overflow opening is covered
4 by one of the housings.

1 15. The solid bowl helical conveyor centrifuge according to Claim 1, wherein one of the gaskets
2 is in contact with the axial end face of the drum and another of the gaskets is in contact with
3 a cylindrical drum head, which is adjacent to the outside wall of the drum.

1 16. The solid bowl helical conveyor centrifuge according to Claim 1, wherein one of the gaskets
2 is between the drumhead and the stationary scraper disk.

1 17. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the at least one
2 housing is pressurized and operates at more than 0.5 bar, preferably 3 to 6 bar.

1 18. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the peripheral
2 speed of the gaskets is greater than 30 m/sec.

1 19. The solid bowl helical conveyor centrifuge according to Claim 1, wherein the temperature
2 during processing of material for centrifugation in an area which is pressurized is more than
3 50°C, preferably 100°C to 160°C.

1 20. A solid bowl helical conveyor centrifuge having the following:
2 a rotating drum, which includes a centrifuge space with a rotatable screw;
3 an inlet tube for supplying a material for centrifugation into the centrifuge space;
4 at least one liquid discharge and at least one solids discharge; wherein

the liquid discharge and/or the solid discharge having at least one or more openings in a rotating part of the solid bowl helical conveyor centrifuge, in particular through openings in the drum wall;

at least one of the openings is covered by a housing which encloses the drum of the solid bowl helical conveyor centrifuge in only some sections, wherein at least one housing is pressurized and operates at more than 0.5 bar, preferably 3 to 6 bar; and

between the at least one housing and the drum and/or other rotating elements of the solid bowl helical conveyor centrifuge (drum heads, hubs) at least one or more gaskets are provided.

21. A solid bowl helical conveyor centrifuge having the following:

a rotating drum, which includes a centrifuge space with a rotatable screw;

an inlet tube for supplying a material for centrifugation into the centrifuge space;

at least one liquid discharge and at least one solids discharge; wherein

the liquid discharge and/or the solid discharge having at least one or more openings in a rotating part of the solid bowl helical conveyor centrifuge, in particular through openings in the drum wall;

at least one of the openings is covered by a housing which encloses the drum of the solid bowl helical conveyor centrifuge in only some sections, wherein at least one housing is pressurized and operates at more than 0.5 bar, preferably 3 to 6 bar; and

between the at least one housing and the drum and/or other rotating elements of the solid bowl helical conveyor centrifuge (drum heads, hubs) at least one or more gaskets are provided, wherein the gaskets are bearing ring gaskets.